

## WE CLAIM:

Sub B1

1. A brake disk assembly comprising an end plate, a pressure plate and brake disks axially aligned and disposed therebetween, wherein said brake disks comprise disks of three different wear portions, whereby disks of a first thickness have an initial wear portion, disks of a second thickness have two thirds of said initial wear portion of said first thickness disks, and disks of a third thickness have one third of the initial wear portion of said first thickness disks, whereby at an overhaul the available wear portion of each of said first thickness disks is approximately equal to the initial available wear portion of each of said second thickness disks, and the available wear portion of said second thickness disks is about equal to the initial available wear portion of each of said third thickness disks and said available wear portion of said third thickness disks are substantially fully worn.

2. A brake disk assembly according to claim 1, wherein all the brake disks of the first thickness, the second thickness and the third thickness are positioned in an envelope space within said disk brake assembly, said brake assembly having an actuator for urging said disks together to provide braking.

3. A brake disk assembly according to claim 1, wherein said brake disks comprise five rotors and four stators interleaved with said rotors.

4. A brake disk assembly according to claim 1, wherein said brake disks comprise three rotors and two stators interleaved with said rotors.

5. A brake disk assembly according to claim 1, wherein said brake disks comprise four rotors and three stators interleaved with said rotors.

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6. A method of assembling and overhauling a disk brake having a plurality of disks with three different available wear portions comprising first thickness disks having a first available wear portion of a first thickness, second

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 available wear portion which is two thirds of the available wear portion of each of the first thickness disks, and third thickness brake disks each having an initial available wear portion which is one third of the available wear portion of each of said first thickness disks, whereby at an overhaul the available wear portion of each first thickness disk is about equal to the initial available wear portion of second thickness disks, and the available wear portion of each disk of said second thickness brake disks is about equal to the initial available wear portion of each of said third thickness disks and said available wear portion of each third thickness disk is substantially fully worn.

10                    12. A brake disk assembly according to claim 11 wherein the pressure plate and the end plate also comprise brake disks.

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 15                    13. A brake disk assembly comprising an end plate, a pressure plate and four rotors and three stators interleaved between said rotors and disposed between said end plate and pressure plate, wherein said rotors and stators comprises brake disks, said brake disks comprising first thickness brake disks each having an initial first available wear portion, second thickness brake disks each having an initial available wear portion which is two thirds of the available wear portion of the first thickness brake disks, and third thickness brake disks each having an initial available wear portion which is one third of the available wear portion of each disk of said first thickness brake disks, whereby at an overhaul the available wear portion of each disk of said first thickness brake disks is about equal to the initial available wear portion of each disk of said second thickness brake disks, and the available wear portion of each second thickness brake disk is about equal to the initial available wear portion of each disk of said third thickness brake disks and
   
 20                    said available wear portion of each disk of said third thickness disks is
   
 25                    substantially fully worn.

<sup>3</sup>                    <sup>2</sup>  
<sup>14</sup>                    14. A brake disk assembly according to claim 13, wherein the pressure plate and end plate are provided with wear portions of differing thicknesses to maintain a constant overall assembly length at each overhaul.

5 *B2*  
 thickness disks each having an available wear portions of a second thickness which is two thirds of the available wear portions of first thickness disks and third thickness disks each having an available wear portion of a third thickness which is one third of the thickness of the available wear portion of said first thickness disks, whereby after an overhaul the available wear portions of each disk of said first thickness disks is about equal to the initial available wear portion of each disk of said second thickness disks and said available wear portion of each second thickness disk is about equal to the initial available wear portion of each said third thickness disks and said third thickness disks are substantially fully worn and replaced.

10 7. A method according to ~~claim~~ *B3* 6, wherein said third thickness disks are replaced with first, second or third thickness disks.

15 8. A method according to claim 6, whereby at a second overhaul, the available wear portion of said first thickness disks is about equal to the initial available wear portion of the third thickness disks and said available wear portion of said second thickness disks is substantially fully worn and said second portion disks are replaced.

20 9. A method according to claim 6, whereby at a second overhaul, said second thickness disks are replaced with first, second or third thickness disks.

25 10. A method according to claim 8, whereby at a third overhaul, the available wear portions of each of said first thickness disks is substantially worn and said first thickness disks are replaced by disks having an available wear portion of the first, second or third thickness disks.

*Sub B3* 11. A brake disk assembly comprising an end plate, a pressure plate and three rotors and two stators interleaved between said rotors and disposed between said end plate and pressure plate, wherein said rotors and stators comprises brake disks, said brake disks comprising first thickness brake disks each having an initial first available wear portion, second thickness brake disks each having an initial

Sub a2

15. A brake disk assembly according to claim 13, wherein each assembly includes one of a pressure plate and an end plate with a wear portion of about two times the thicknesses of the other one of said pressure plate and said end plate.

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16. A brake disk assembly comprising an end plate, a pressure plate and five rotors and four stators interleaved between said rotors and disposed between said end plate and pressure plate, wherein said rotors and stators comprise brake disks, said brake disks comprising first thickness brake disks each having an initial first available wear portion, second thickness brake disks each having an initial available wear portion which is two thirds of the available wear portion of the first thickness brake disks, and third thickness brake disks each having an initial available wear portion which is one third of the available wear portion of each disk of said first thickness brake disks, whereby after an overhaul the available wear portion of each disk of said first thickness brake disks is about equal to the initial available wear portion of each disk of said second thickness brake disks, and the available wear portion of each disk of said second thickness brake disks is about equal to the initial available wear portion of each disk of said third thickness disks and said available wear portion of each disk of said third thickness disks is substantially fully worn.

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